REMARKS/ARGUMENT

Claims 118-189 are pending in the present application. Claims 1-117 were cancelled in a previous amendment. Claims 118, 150, 184, 186, and 189 are amended herein.

Support for the claim amendments can be found, for example, in FIGs. 1-3, 25, 26, 30, 57, 58, 67 and 69 and in ¶¶ [0086], [0089], [0090], [0102], [0107], [0124], [0233], [0382], [0504] and [0507] of pre-grant publication US2004/0034514. No new matter has been added.

Telephone Interview and Interview Summary

The Applicants note with appreciation the telephone interview with Examiner Osborne on December 9, 2008. During the interview, the Applicants' representative discussed with the Examiner the patentable subject matter rejection, particularly in light of the withdrawal of similar rejections in the two related parent applications to the present application, Application No. 09/675,778 and Application No. 09/995,222. Additional claim amendments were discussed to overcome the present patentable subject matter rejection.

Patentable Subject Matter Rejection of Claims 118-189

In the July 22, 2008, non-final Office action, claims 118-189 were rejected under 35 U.S.C. § 101 on allegations that the claims preempt every substantial application of an idea – a mathematical algorithm. *See* Office Action, at ¶4. Claims 119-149 depend from rejected independent claim 118. Claims 151-181 depend from rejected independent claim 150. Claim 185 depends from rejected independent claim 184. Claim 188 depends from rejected independent claim 187. The rejection of claims 118-189 is respectfully traversed.

The Federal Circuit recently stated that a claimed process is surely patent-eligible under § 101 if: (1) it is tied to a particular machine or apparatus or (2) it transforms a particular article into a different state or thing. *In re Bilski*, 545 F.3d 943, 954 (Fed. Cir. 2008) *citing Gottschalk v. Benson*, 409 U.S. 63, 70 (1972) (emphasis added). The Federal Circuit has further stated that a claimed process involving a fundamental principle that uses a particular machine or apparatus would not preempt uses of the principle that do not also use the specified machine or apparatus in the manner claimed. *In re Bilski*, 545 F.3d at 954 (emphasis added). The Federal Circuit went

on to state that it believes its "reliance on the Supreme Court's machine-or-transformation test as the applicable test for § 101 analyses of process claims is sound." *Bilski*, 545 F.3d at 956, 959.

Although the claimed invention utilizes mathematical algorithms, independent method claims 118, 184, and 187 recite, *inter alia*, at least one of:

(i) a method executed in a computer system or computer apparatus;

(ii) determining using a processor;

(iii) determining using the processor or another processor;

(iv) storing in a computer readable memory or computer readable data storage system;

(v) outputting a solution to a model in a format configurable for display on a graphical user interface; and

(vi) application modes configured to model the physical quantities of at least one of a structural system, a fluids system, and an electromagnetic system.

Independent computer readable medium claims 150, 186, and 189 recite, *inter alia*, at least one of:

(a) determining using the at least one processor or another processor;

(b) output of a model is configured to be stored in a computer readable memory or in a computer readable data storage system;

(c) outputting a solution to a model in a format configurable for display on a graphical user interface; and

(d) application modes configured to model the physical quantities of at least one of a structural system, a fluids system, and an electromagnetic system.

The Office Action continues to rely on *Gottschalk v. Benson*, 409 U.S. 63 (1972), as support for the allegation that the rejected claims preempt every substantial application of an idea. However, the pending claims are distinguishable from *Benson*. Unlike the claims in *Benson*, the amended claims, as discussed above, are different from the attempt in *Benson* to patent a binary code that has no practical application outside a computer. For example, claim 118 includes, *inter alia*, (i) a method executed in a computer system for producing a model; (ii) determining, using the processor or another processor, a solution to the model of the combined physical system; (iii) application modes configured to model the physical quantities of at least

one of a structural system, a fluids system, and an electromagnetic system; and (iv) storing in a computer readable memory or a computer readable data storage system the solution to the model of the model. That is, the pending claims are either apparatus claims (e.g., a computer readable medium) or method claims tied to a particular machine or apparatus (e.g., a processor, another processor), and thus, are patent-eligible under § 101. *See Bilski*, 545 F.3d at 954. Furthermore, the claims recite application modes configured to model the physical quantities of at least one of a structural system, a fluids system, and an electromagnetic system, and thus, do not preempt every substantial practical application of an idea.

For at least these reasons, the rejection of claims 118-189 should be withdrawn, and thus, it is respectfully requested that the claims be allowed.

CONCLUSION

The Applicant submits that claims 118-189 are in condition for allowance and action toward that is respectfully requested. If there are any matters which may be resolved or clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney at (312) 425-8552.

* * * * *

It is believed that no additional fees are due other than the fee for the two-month extension of time; however, should any additional fees be required (except for payment of the issue fee) or credits be due, the Commissioner is authorized to deduct the fees from or credit the overpayments to the Nixon Peabody Deposit Account No. 50-4181, Order No. 801939-000112.

Respectfully submitted,

Dated: December 22, 2008

/Peter J. Prommer, Reg. No. 54743/
Peter J. Prommer
NIXON PEABODY LLP
161 North Clark Street, 48th Floor
Chicago, IL 60601-3213
(312) 425-3900 - main
(312) 425-3900 - facsimile

ATTORNEY FOR APPLICANTS